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Geospatial Services in Special Libraries: A Needs Assessment Perspective

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Special Libraries, Special Challenges Column

Special Libraries, Special Challenges is a column dedicated to exploring the unique public services challenges that arise in libraries that specialize in a particular subject, such as law, medicine, business, and so forth. In each column, the author will discuss public service dilemmas and solutions that arise specifically in given subject libraries while drawing links to how such issues affect librarianship in general. Special or subject-matter librarians interested in authoring a piece for this column are invited to contact Ilana Barnes at ibarnes@purdue.edu.

This column is written by the column editor, Ilana Barnes. Ilana Barnes is Business Information Specialist (Assistant Professor of Library Science) at Purdue University.

Geospatial services in a special libraries: A needs assessment perspective

Geospatial Services: An Introduction

Once limited to geographers and mapmakers, Geographic Information Systems (GIS) has taken a growing central role in information management and visualization. Geospatial services run a gamut of different products and services from Google maps to ArcGIS servers to Mobile development. As the world becomes more and more connected, there is a rise of geospatial analysis, location-based decision-making, and location-based services. I would posit that users of special libraries across the country have been asking location-based questions for much longer than they have had the means to answer them: Where is the nearest gas station? Where should I live? In the eighteenth century, exactly how many log cabins were in this county?

Geospatial services are not new. Libraries have been writing about their emergence since the 1980s (Gibbs 1989). But what is new is that as libraries become more interested in emerging technologies, they are in a unique position to offer geospatial services in ways they could not in the past. As the emphasis of some special libraries shifts away from books and space, they may look to GIS as one potential new avenue to grow their specialized services. Special libraries have been providing catered and specialized services for many years. As opposed to public or large academic libraries, special libraries are often blessed with a set of defined user groups to whom they can target services and collections for which they can develop geospatial components.

On the other hand, the time and resources of special libraries is limited. Depending on the user needs, implementing geospatial services can be a major commitment of resources and time. It may require the purchasing and maintenance of servers, hiring new personnel such as GIS Librarians and application developers, and time spent troubleshooting and educating users. Additionally, even though GIS has wide ranging applications, there is not widespread use in all communities. As an example from academic business librarianship, despite widespread talk of location-based services and the value of geospatial methods in business, there are only a handful of business programs across the United States who offer GIS classes as part of their business or management programs (Ramakrishna et al.).With budgets and personnel shrinking, libraries more than ever have a duty to adequately define needs and institutional support before pursuing new types of technology.

Due to space constraints, this column will not go over the multitude of services that a library could offer. Some academic special libraries examples include server space for GIS data, ESRI licenses, ArcGIS support, one-shot workshops on GIS, development of GIS tools for specific applications, and hosting of GIS libraries of data or documentation.

Before implementing geospatial services in special libraries, librarians need to consider three important questions: 1) What sorts of GIS activities are going on in my library's user group already? 2) What sorts of services is my library in need of or would users like my library or my institution to address? 3) What sorts of partnerships, collaborations and personal development opportunities exists for me to help address the needs of my users and existing GIS communities?

This column is meant to offer some commitment-free ways that libraries can find out the answers to these questions and more. The examples will reflect the background of a business library environment, which caters to an academic faculty of a management school, but these methods apply to any sort of library with a segment of professional or academic users.

Pre-Existing Use and Environment Scan

Professional or academic users know that librarians are the people to talk to when the databases go down or when they need some help with secondary source research. However they may not be aware of a librarian's expertise or interest in emerging technology and so may not mention their work in these matters to the librarian. Librarians should think of this as a compliment: their user base respects their time and are not burdening them with a whole lot of information not useful to the situation.

Assessing the geospatial service needs of a special library begins with assessing what sorts of activities already exist. Librarians should check with their existing contacts within their user community and ask if the users know of anyone using GIS. If so, librarians should find out what they used it for, and what types of software they are using or what analysis they are doing. At this point, a librarian does not need to know much about what the various GIS software do, but the librarians should be familiar with some of their names: ArcGIS, Google Earth, GRASS and QGIS. Librarians will also want to look at their users' websites, sharepoint sites, white papers and other secondary sources to find some other targets for further questions, assessing how prevalent geospatial methods are in the library's user community, collecting names of prominent users and groups. If the library is at an academic institution, doing a quick search of the course catalog can reveal there are any existing classes that use geospatial methods and in which departments they are found.

If librarians have access to a listserv or other mailing list, send a survey to the user group. I had a large amount of success using a survey to find out what sort of work was being done in my user community. The stated goal of this short survey was to "assess needs for data services in the Krannert School of Management". This survey asked a few basic questions, including the patron's name and whether they used GIS (with a definition of what GIS was). If they used GIS, the survey asked about how they used it and what sort of software they used. The survey also asked if they would be interested in meeting with a Business Information Specialist or Data

Specialist from the libraries irrespective of whether or not they used GIS. This question allowed an easy opportunity to reach out to these users as part of the needs assessment.

In my case, the survey was very useful. I had 21 responses, three of which indicated that they would be interested in meeting with a business or data librarian. Seven respondents indicated they had used GIS software in the past, with three respondents who indicated they were not sure. This may not seem like a large number, but this survey provided at least seven names I could speak to about geospatial services that I did not have before.

Needs Assessment and Implementation

Depending on the library's resources, doing an environmental scan may be enough to concentrate geospatial services. At this point, librarians often have a much smaller list of users already engaged in GIS methods and can conduct interviews with these users. Data Curation profiles (Witt et al., 2009) offer an easy method for asking more direct data questions to see what sort of services we can offer to existing user groups, even when librarians know very little about geospatial data or methods.

After the library has discovered the existing geospatial uses, librarians can then turn towards education and outreach. I found that while in my department there were few geospatial methods actually being practiced, there was a large interest in these methods, especially in teaching and learning. Institutional culture, different methods employed and lack of training may explain the lack of geospatial methods being practiced. Some of these issues can remedied through greater training and support from the library.

Once the library knows what sort of needs exist, partnerships and collaboration are key. IT departments often provide much of the server space for geospatial services and often understand the geospatial realities of projects. Geospatial experts in geography and engineering departments are often looking for novel applications in areas like business and the humanities. Additionally, there are many outlets for geospatial services professional development. ESRI offers training modules on ArcGIS. Professional organizations such as the Introduction to Spatial Literacy I and II online courses, offered by the American Library Association's RUSA Committee, can also aid librarian professional development. There are geospatial products that libraries can purchase such as SimplyMap and ESRI Online. Additionally, if the need for geospatial services is large, the library may consider hiring an application developer or GIS specialist to develop services for these users.

Conclusion

This column is meant to provide guidance to librarians who are interested in incorporating geospatial services into their special libraries. Not all special libraries need to develop geospatial services; through the process of conducting a needs assessment and environmental scan of resources, the library may find that existing users are being served very well by the services given by other organizations. Additionally, there may not be a large enough interest in the library's user group to warrant additional effort into education and outreach. As special libraries look for areas to expand their specialized resources, geospatial services are just one area that

could be considered and expanded based on the needs of the library. Doing a needs assessment is by no means a promise of service, but rather the exploration of new choices and options in 21st century libraries.

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